CLAIMS

1. A sample tube assembly incorporating a fluid-tight label chamber, said label chamber being attached to or forming part of the body of the sample tube.

2. A sample tube assembly incorporating a fluid tight label chamber wherein the tube assembly comprises:-

(i) a tube portion, the bottom of which is adapted to accept an end cap; and

(ii) an end cap adapted to be joined to the bottom of the tube portion; and

(iii) a label chamber provided in use by a space between the bottom or outer surface of the bottom of the tube portion and the inner surface of the end cap;

and wherein the end cap is fused, welded or otherwise joined to the bottom of the tube portion to provide a fluid tight-seal.

3. A sample tube assembly as claimed in Claim 2 wherein the end cap comprises a base and an upstanding sidewall extending substantially around the perimeter of the cap, the outermost end edge of the sidewall being adapted to cooperate with a shoulder formed around the bottom of the tube portion.

4. A sample tube assembly as claimed in Claim 2 wherein prior to assembly, the end cap incorporates a ridge extending substantially around the circumference of the sidewall of the end cap.

5. A sample tube assembly as claimed in Claim 2 wherein prior to assembly a shoulder on the bottom of the tube portion also incorporates a ridge extending substantially around the circumference of the tube portion.

6. A sample tube assembly as claimed in Claim 2 wherein a ridge on the end cap and a ridge on the tube portion contact each other when the end cap is placed onto the end of the tube portion.

7. A sample tube assembly as claimed in Claim 2 wherein during the assembly manufacturing process material in two contacting ridges is heated and compressed to form a fluid tight seal between the tube portion and the end cap.

8. A sample tube assembly as claimed Claim 2 wherein a shoulder on the tube portion incorporates a groove or depression adapted to co-operatively engage with a corresponding ridge on the end edge of the end cap sidewall.

9. A sample tube assembly as claimed in Claim 2 wherein a shoulder on the tube portion incorporates a ridge adapted to co-operatively engage with a corresponding groove or channel on the end edge of the end cap sidewall.

10. A sample tube assembly as claimed in Claims 2 wherein the end cap is a snap fit with the bottom of the tube portion.

11. A sample tube assembly as claimed in Claim 2 wherein the assembly further comprises a label.

12. A sample tube assembly as claimed in Claim 2 wherein the assembly further comprises a laser etched label.

13. A sample tube assembly as claimed in Claim 2 wherein the assembly further comprises a label which is formed from paper.

14. A sample tube assembly as claimed in Claim 2 wherein the assembly further comprises a label which is formed from a plastics material.

15. A sample tube assembly as claimed in Claim 2 wherein the assembly further comprises a label and wherein the label incorporates a bar code.

16. A sample tube assembly as claimed in Claim 2 wherein the assembly further comprises a label and wherein the label incorporates a binary code.

17. A sample tube assembly as claimed in Claim 2 wherein the assembly further comprises a label and wherein the label incorporates an alphanumeric code together with either a bar code or a binary code.

18. A sample tube assembly as claimed in Claim 2 wherein the end cap is fused to the tube portion using ultrasound.

19. A sample tube assembly according to Claim 2 wherein a region in the end cap over the label is substantially transparent to visible light.

20. A sample tube assembly incorporating a label characterised in that the label is encapsulated within a sealed housing or label chamber.

21. A sample tube assembly as claimed in Claim 20 wherein the label incorporates a code consisting of optically readable characters.

22. A sample tube assembly as claimed in Claim 20 wherein the tube assembly comprises:-

(i) a tube portion, the bottom of which is adapted to accept an end cap; and

(ii) an end cap adapted to be joined to the bottom of the tube portion; and

(iii) a label chamber provided in use by a space between the bottom or outer surface of the bottom of the tube portion and the inner surface between the bottom or outer surface of the bottom of the tube portion and the inner surface of the end cap; and

(iv) a label;

and wherein the end cap is fused, welded or otherwise joined to the bottom of the tube portion to provide a fluid tight-seal around the circumference of the cap.

23. A sample tube assembly as claimed in Claim 20 wherein the label is encapsulated within a sealed fluid tight chamber and said chamber is then attached to a tube portion of the sample tube assembly.

24. A sample tube assembly as claimed in Claim 20 wherein the label chamber is formed by the interstitial space between an inner tube portion and an outer tube portion, said portions being sealed together to form a fluid tight chamber therebetween.

25. A method of constructing a sample tube assembly comprising the steps of:-

(i) forming a tube portion;

(ii) forming an end cap for the closed end of the tube;

(iii) placing a label in the end cap;

(iv) placing the end cap onto the bottom of the tube portion and forming a fluid tight seal between the two components such that the label becomes encapsulated in a fluid tight chamber.

26. A method of constructing a sample tube assembly as claimed in Claim 25 wherein the two components are fused together using ultrasound.

27. A method of constructing a sample tube assembly comprising the steps of:-

(i) encapsulating a label in a fluid tight label chamber;

(ii) attaching said label chamber to a tube.

28. A method of constructing a sample tube assembly comprising the steps of:-

(i) forming a tube from an inner tube portion component and an outer tube portion component said components being adapted to nest one within another;

(ii) fusing or otherwise joining the two tube portion components to form a fluid tight label chamber therebetween.